



National Pollutant Discharge Elimination System

DRAFT GENERAL PERMIT FACT SHEET for Wastewater Discharges from Sand, Gravel, Dimension Stone and Crushed Stone Operations

NPDES Permit No. ING490000

September 14, 2012

Indiana Department of Environmental Management

Office of Water Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
www.idem.IN.gov

Existing Permit Information:	<p><u>Permit Number:</u> ING490000 (Master General Permit). Existing facilities permitted under 327 IAC 15-12 will retain their existing general permit tracking numbers, and new permitted facilities will have tracking numbers using same numbering protocol.</p> <p><u>Expiration Date:</u> Under 327 IAC 15-12, each permitted facility has a unique expiration date based upon five (5) years from when coverage commences. Under this general permit all permitted facilities will have the same expiration date.</p>
Source Location:	State-wide
Receiving Stream:	All waters of the state of Indiana, except for Outstanding State Resource Waters, Exceptional Use Streams, and Outstanding National Resource Waters
Proposed Action:	New administrative NPDES general permit to replace existing NPDES general permit-by-rule (327 IAC 15-12)
Source Category	NPDES Minor – Industrial
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The Federal Water Pollution Control Act (also referred to as The Clean Water Act (CWA) (33 U.S.C. 1251 et seq.), which was enacted in 1972, provides that the discharge of pollutants to the waters of the United States from any point source is unlawful, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The primary condition determining eligibility for this permit is ensuring that the discharge consists of only wastewater from sedimentation treatment basins from Sand, Gravel, Dimension Stone, and Crushed Stone Operations. Dischargers who meet the eligibility requirements may apply for coverage by this NPDES general permit, instead of seeking coverage under an individual NPDES permit.

Development of a Fact Sheet for NPDES permits is required by Title 40 of the Code of Federal Regulations, Section 124.8 and 124.56. This document fulfills the requirements established in

those regulations by providing the information necessary to inform the public of actions proposed by the Indiana Department of Environmental Management (IDEM) as outlined in 40 CFR 122.28 and 327 IAC 5-3-8.

A. Description of Category:

The purpose of this general permit is to regulate the wastewater discharges from sand, gravel, dimension stone, and crushed stone operations which utilize sedimentation basin treatment for pit dewatering; channel machines; broaching; jet piercing; scrubber water from wet scrubbers used for air pollution control; dust suppression spray water; wash water from spray bars for final screening operations; and noncontact cooling water for cooling of crusher bearings, drills, saws, dryers, pumps, and air compressors. Sedimentation basins are settling ponds with a controlled water release structure used to collect and store sediment produced by resource extraction activities. A sedimentation basin can be constructed by excavation or by placing an earthen embankment across a low area or drainage swale. The basin detains sediment-laden runoff long enough to allow most of the sediment to settle out. Henceforth in this document these discharges will be referred to as sedimentation treatment basin discharges.

NPDES general permits are developed and issued to cover multiple facilities engaged in the same process category instead of an individual facility within the State of Indiana. IDEM first developed a general NPDES permit-by-rule (327 IAC 15-12) for quarry sedimentation treatment basin discharges in 1994. As a result of statutory changes to Indiana law in 2011, IDEM is now changing its method of administering NPDES general permits by changing from a permit-by-rule format to an administrative format which utilizes a “master general permit” (EPA terminology) which will be renewed and reevaluated on a five-year interval. Persons who seek coverage under this master general permit will continue to be assigned permit tracking numbers beginning with “ING49” but coverage under the general permit will be limited to the permit term established in the master general permit once it is issued.

As such, the discharges generally require the same effluent limitations and monitoring requirements. As of September 2012, there are approximately 93 facilities which are currently regulated under 327 IAC 15-12. Since the permit requirements for all of these discharges are similar and because of the number of such dischargers, it is the opinion of IDEM that this category of sources is controlled more appropriately under a NPDES general permit rather than under individual permits. These discharges are similar in that they:

- 1) are comprised solely of wastewater from sedimentation treatment basins at sites involved with the mining and processing of sand, gravel, dimension stone or crushed stone; and
- 2) are generated on the quarry property by processes that include pit dewatering; channel machines; broaching; jet piercing; scrubber water from wet scrubbers used for air pollution control; dust suppression spray water; wash water from spray bars

for final screening operations; and non-contact cooling water for cooling of crusher bearings, drills, saws, dryers, pumps, and air compressors.

B. Geographic area covered:

This general permit is intended to potentially cover any discharge of wastewater from sedimentation treatment basins at sand, gravel, dimension stone and crushed stone operation sites within the boundaries of the state of Indiana, except as denoted herein.

C. Receiving waters:

This general permit will authorize discharges to all waters of the State of Indiana, except for Outstanding State Resource Waters, Exceptional Use Streams, and Outstanding National Resource Waters. Dischargers to these receiving waters are required to obtain an individual NPDES permit to regulate their discharges.

D. Exclusions from general permit coverage

Discharges covered under this general permit will be from sand, gravel, dimension stone, and crushed stone quarries with discharges solely comprised of wastewater from sedimentation treatment basins. This general permit contains certain specific exclusions from coverage under the general permit which are denoted in Section 1.3 of the permit. In such instances the person will be required to apply for an individual NPDES permit. The following discharges are not authorized by this permit:

- 1) storm water discharges associated with construction or industrial activity;
- 2) discharges from sedimentation treatment basins that are regulated under an individual permit;
- 3) discharges from sedimentation treatment basins that the Commissioner determines will cause, have the reasonable potential to cause, or contribute to, violations of water quality standards;
- 4) discharges that would add loadings of a pollutant that is identified as causing or contributing to the impairment of a water body on the current 303(d) list of impaired waters;
- 5) discharges to a receiving stream that will result in an increased loading of a pollutant that is given as a cause of degradation to the receiving stream;
- 6) direct discharges into waters that are designated as Outstanding State Resource Waters, Exceptional Use Waters, or Outstanding National Resource Waters as defined under IC 13-18-3-2(u), 327 IAC 2-1-11(b), 327 IAC 2-1.5-19(b), and 327 IAC 2-1.3-3(d);
- 7) discharges from sedimentation treatment basins which would significantly lower the water quality of the receiving water as defined under 327 IAC 2-1.3-2;
- 8) new source (i.e. those with no prior permit authorization) discharges of the process wastewaters described in section 1.2 of this general permit if there are non-discharging alternatives readily available, such as the use of an on-site abandoned quarry pit(s) for disposal of the process wastewater in lieu of having a surface water discharge; and

- 9) discharges from sedimentation treatment basins containing water treatment additives (WTAs) except for those which have received prior IDEM approval for the particular site.

E. Application for Coverage:

This general permit proposes to provide coverage for any quarry with discharges composed entirely of sedimentation basin treatment wastewater from Sand, Gravel, Dimension Stone, and Crushed Stone operations which meet the criteria listed in Section A and agree to be regulated under the terms of the general permit.

Each facility seeking coverage under this general permit must submit a Notice of Intent (NOI) application. Federal regulations found in 40 CFR 122.21(a) exclude persons covered by general permits from requirements to submit an application for an individual permit. NOI requirements are intended to establish a mechanism that can be used to establish a clear accounting of the number of permittees covered by the general permit, the identities, locations, mailing addresses, and nature of discharge.

F. Antidegradation Evaluation

The following antidegradation determination is based on 327 IAC 2-1.3. The general permit for Discharges from Sand, Gravel, Dimension Stone and Crushed Stone Operations is based on the best professional judgment of the best available treatment in accordance with 327 IAC 5-5-2 and Indiana water quality standards.

Wastewater Characterization

The pollutants expected to be discharged to the receiving stream are naturally occurring sediment and rocks. The water quality is determined by measuring the concentration of Total Suspended Solids which comes from the mining or processing of sand, gravel, dimension stone and crushed stone. The purpose of issuing the NPDES permit to facilities mining or processing of sand, gravel, dimension stone and crushed stone is to ensure that the discharge to the receiving stream does not result in deleterious effects to aquatic life and is in compliance with 327 IAC 2-1-6 and 327 IAC 2-1.5-8, the minimum narrative surface water quality standards.

The general permit imposes effluent limits based on treatment technology and narrative water quality standards. The effluent limits are not based upon any Federal Effluent Guidelines.

Flow, total suspended solids, and pH shall be limited and monitored for facilities regulated by this general rule. Monitoring and limiting these parameters will ensure the proper operation of these systems and the best management practices being employed to control the wastewater being discharged.

Eligibility

All new and existing facilities engaged in sand, gravel, dimension stone or crushed stone operations are covered by this general permit. Pursuant to 327 IAC 15-2-9, applicable

requirements contained in this permit must be adequate to ensure compliance with the water quality standards contained in 327 IAC 2-1, or 327 IAC 2-1.5. Pollutants which have numeric water quality criteria are not expected to be present due to the source and nature of this discharge. If a substance is found to be present in the discharge which shows a reasonable potential to exceed water quality standards, then that facility will be required to obtain an individual NPDES permit.

Demonstration of a Non-Significant Lowering of Water Quality

The general permit has the following conditions to ensure that the narrative water quality standards are achieved for Total Suspended Solids:

Weekly Average = 30 mg/l

This effluent limit for total suspended solids has been established by IDEM as being representative of the Best Conventional Treatment (BCT) for the removal of total suspended solids in accordance with 327 IAC 5-5-2.

A person regulated under this rule shall comply with the following additional discharge requirements:

- (1) The discharge shall be essentially free of floating and settleable solids.
- (2) The discharge shall be free of substances that are in amounts sufficient to be unsightly or deleterious or which produce color, odor, or other conditions in such a degree as to create a nuisance.

It is not possible to determine if a significant lowering of water quality will occur because there are no water quality criteria for total suspended solids because it is not chemical specific. Since it is not possible to determine if a significant lowering of water quality will occur and total suspended solids is a regulated pollutant, new sources in this category of discharge must go through an antidegradation demonstration to show that the discharges are necessary and that they accommodate important social or economic development in the area in which the waters are located.

Is a discharge necessary?

It is not likely that an existing sanitary wastewater plant is located near any of the operations listed above (see section A, Description of Category). If the stone, sand or gravel operation is located near a sanitary wastewater treatment system, the treatment system is not likely to accept the wastewater from one of these operations due to the fact that the operation's wastewater contains no nutrients for the existing wastewater treatment plant to digest. Adding large portions of water without any nutrient value to a sanitary wastewater treatment plant could upset the sanitary WWTP.

The majority of the water that is discharged from a sand, gravel, dimension stone, and crushed stone operation is treated by a sedimentation pond built to remove suspended solids or by the pit created by the mining of the sand gravel or stone. Sedimentation ponds are the accepted treatment system to cost-effectively remove suspended solids

from sand, gravel and stone operation wastewater. In most cases, a discharge to surface waters is necessary because non-discharge alternatives are not available. The general permit will require the applicant to utilize non-discharging alternatives when they are available to the applicant. Such alternatives include discharging wastewater to an on-site abandoned stone quarry pit. The general permit will require stone, sand and gravel operations to discharge to on-site pits that do not have a surface discharge when they have that opportunity.

Sand, gravel and stone operations provide jobs and supply the construction industry with essential building materials for asphalt, concrete, landscaping, roads and many other uses. Therefore, sand, gravel and stone operations accommodate important social and economic development in the area of the discharge.

G. When to Apply

State NPDES rules require individual permit applications to be filed at least 180 days prior to the commencement of the activity. The current NPDES general permit-by-rule (327 IAC 15-12) allows an NOI to be filed at least fifteen (15) days prior to the commencement of the proposed activity. Under the terms and conditions of this general permit, the following time frames are proposed:

- a) New Facility: For a new facility, an NOI shall be submitted at least thirty (30) days before any discharges of sedimentation treatment basin wastewater.
- b) Existing Facility: For a facility which has existing, effective coverage under the general permit-by-rule (327 IAC 15-12) on the effective date of this general permit, such coverage shall automatically be extended provided that the permittee takes one of the following actions within sixty (60) days following the effective date of this general permit.
 - 1) The permittee submits a new NOI in accordance with Section 3.0 of this general permit to affirm it intends to comply with the new general permit. The Commissioner may waive certain specific NOI requirements for permittees who have submitted a complete NOI to IDEM under 327 IAC 15-12 within the past two (2) years prior to the effective date of the general permit ;
 - 2) The permittee notifies IDEM in writing of its intent to terminate general permit coverage in accordance with Section 5.0 of this general permit; or
 - 3) The permittee submits an individual NPDES application package to IDEM for the permitted facility. In that case the general permit coverage will remain in effect until the effective date of the individual NPDES permit.

Persons with existing individual NPDES permits that contain sedimentation basin discharges may request that the individual NPDES permit be revoked or modified to remove the sedimentation basin point sources from that existing NPDES permit. A Notice of Intent shall also be submitted with such request. Upon the effective date of revocation or modification of the individual NPDES permit, the general permit shall become applicable to those sedimentation basin discharges. For subsequent renewals of

general permit coverage under this general permit, an NOI shall be submitted not less than ninety (90) days before the permit expires.

- c) **Transfer of Ownership:** In the case of a transfer of ownership an NOI must be submitted not less than 30 days before the transfer.

H. Permit Conditions:

1) Current Numeric Permit Limits & Monitoring Requirements

Under State and Federal law and regulations 40 CFR 122.44 and 327 IAC 5, a discharge permit must establish effluent limitations equivalent to best available technology economically achievable (BAT). For some industry categories, such effluent limitations have already been established by the EPA.

- a) **Flow** is a standard parameter to be monitored in all NPDES permits. As in the general permit-by-rule, the requirement to report both the monthly average and daily maximum flows for each month has been retained. This parameter is required of all NPDES permits and is included in this permit in accordance with 327 IAC 5-2-13(a)(2).
- b) **pH and Total Suspended Solids (TSS)** are included in the general permit to ensure that the discharge will not violate Indiana water quality standards. Limitations for both are at the same levels as were set for this category of coverage under general permit requirements specified in 327 IAC 15-12. The pH shall be no less than 6.0 nor greater than 9.0 standard units. TSS is limited to 30 mg/l as a weekly average. The monitoring frequency for Total Suspended Solids and pH is set at four (4) times annually, which shall occur a minimum of once per quarter.

2) Proposed New Monitoring Requirement

- a) **Total Flow.** An additional reporting requirement is being added to require the permittees to monitor and report the total flow value for the month in units of million gallons (mgal). This requirement has actually been a parameter listed on the Discharge Monitoring Report forms for all NPDES permittees for the past several years, and it is included to assist IDEM in properly assessing the annual permit operating fees set forth under IC 13-18-20.

3) Narrative Water Quality Based Limits

The narrative water quality standards contained in 327 IAC 2-1-6(a)(1) (A)-(E) and 327 IAC 2-1.5-8 have been included in this general permit to ensure that the narrative water quality criteria are met.

4) Monitoring and Reporting Requirements

The monitoring frequency for Total Suspended Solids and pH is set at four (4) times annually, which shall occur a minimum of once per quarter. Flow monitoring was previously set at once per quarter, but it is proposed to change this to a daily requirement. Total flow must be calculated once monthly.

The permittee is required to complete and submit federal Discharge Monitoring Reports (DMRs) and state Monthly Monitoring Reports to IDEM containing the results obtained during the previous monitoring period by the 28th day of the month following the monitoring period. Paper copies of DMRs, MMRs, and any communication regarding compliance with the conditions of this general permit which are submitted by mail must be sent to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42 CDS
Compliance Data Section
100 N. Senate Avenue, Indianapolis, IN 46204.

Alternatively permittees may seek and obtain approval from IDEM for electronic submission of Notice of Intent forms, Notice of Termination forms, DMR forms and other report notification requirements. The permittee may enroll in NetDMR program for the electronic submittal of the federal Discharge Monitoring Reports and the state Monthly Monitoring Report forms in lieu of submitting them via U.S. mail. Once approved by IDEM, the permittee may use this process for submitting reports in lieu of submitting paper copies of the reports to IDEM.

I. Spill Response and Reporting Requirement

Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under 327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedances that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedance to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

J. Fees

In accordance with IC 13-18-20-12, any application for a new permit, renewal of a permit, modification of a permit, or variance from a permit requirement must be accompanied by an application fee, which is currently \$50.00 for this type of general permit. Once a person is approved for coverage under a general permit, they are also subject to annual operating fees. These annual fees are set by statute (IC 13-18-20).

K. Re-opener Clauses[s]

General permits may be issued, modified, revoked and reissued, or terminated in accordance with 40 CFR 124.5 and 40 CFR 123.25 either at the request of any interested person (including the permittee) or upon the Commissioner's initiative to incorporate any of the reopening clause provisions cited at 327 IAC 5-2-16.

L. Permit Term

This general permit is proposed to be in effect for a five-year term.

M. Forms, References, and Guidance Documents

The IDEM website will contain information about each of the NPDES general permits, including the issued permit(s), Notice of Intent forms, Notice of Termination Forms, and helpful reference documents to assist the regulated community and the general public. Please refer to:

<http://www.in.gov/idem/4869.htm>